re-run

IFW16

RAW SEQUENCE LISTING DATE: 08/02/2004
PATENT APPLICATION: **US/09/893,033** TIME: 11:59:11

Input Set : **N:\Crf4\Refhold\09_folder\I893033.raw**
Output Set: **N:\CRF4\08022004\I893033.raw**

<110> APPLICANT: KAKEFUDA, GENICHI
KOOP, HANS-ULRICH
STURNER, STEPHEN
ZHEN, RUI-GUANG
<120> TITLE OF INVENTION: CYANOBACTERIAL NUCLEIC ACID FRAGMENTS ENCODING PROTEINS USEFUL FOR CONTROLLING PLANT TRAITS VIA NUCLEAR OR PLASTOME TRANSFORMATION
<130> FILE REFERENCE: BASF 100,100 PRV
<140> CURRENT APPLICATION NUMBER: US/09/893,033
<141> CURRENT FILING DATE: 2001-06-27
<150> PRIOR APPLICATION NUMBER: 60/214,705
<151> PRIOR FILING DATE: 2000-06-27
<160> NUMBER OF SEQ ID NOS: 19
<170> SOFTWARE: PatentIn Ver. 2.1
<210> SEQ ID NO: 1
<211> LENGTH: 33
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: Description of Artificial Sequence: Primer
<400> SEQUENCE: 1
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<210> SEQ ID NO: 2
<211> LENGTH: 33
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: Description of Artificial Sequence: Primer
<400> SEQUENCE: 2
cgcataagct ttgcagatgg agacggtttg ggc 33
<210> SEQ ID NO: 3
<211> LENGTH: 1735
<212> TYPE: DNA
<213> ORGANISM: Synechocystis sp.
<400> SEQUENCE: 3
ccctggtagc atttaataca aattggctat cttggcaaag tcccccgaaa tattacgaaa 60
cgtaaagtat aataacaatc aacctgtaaa ccccaaatgc cttagcgaga cagtaaccca 120
tgcgcgttgt gatcgccgga gccggattag ccggcctagc ctgtgccaaa tacttagccg 180
atgcgggctt tacccccgtc gtcttggaac gtagggatgt attaggcggg aagatcgccg 240
cgtggaaaga tgaggacgga gattggtacg aaaccggcct acacattttt tttggggcct 300
atcccaacat gttgcagtta tttaaggaat tggatatcga agatcgtctg caatggaaag 360
agcacagcat gatcttcaac caaccagaga aaccaggtac ctactctcgg ttcgattttc 420
cggatattcc ggccccccatc aatggtttgg tagccattct tcgcaacaac gatatgctta 480

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     47       cctggccgga gaaaattcgc tttggcttgg gactcttgcc ggccattgtc cagggccaga 540
     48       gctatgtgga agaaatggat aaatacactt ggtcagagtg gatggccaaa caaaatattc 600
     49       ccccccgcat cgaaaaagaa gttttcattg ccatgagtaa gacgttgaac tttattgatc 660
     50       ccgatgaaat ttccgccacc attttactta ctgccctcaa tcgcttttta caggaaaaaa 720
     51       atggctctaa gatggcattc ctggatgggg caccaccgga gcgtctttgc caacctttgg 780
     52       tcgactatat tacggaacgg ggaggggaag tacacattaa taaacctctc aaagaaattt 840
     53       tgcttaatga agatggttcc gttaagggtt acttaatccg gggcctagat ggagcccccg 900
     54       acgaagtgat cacagcggat ttatatgtgt ctgccatgcc ggtggatccc ctgaaaacca 960
     55       tggtgccagc gccctggaga gaatatcctg agtttaagca aatccaaggt ttggaaggag 1020
     56       tcccggtcat taacctccac ctgtggtttg accgtaagtt aaccgacatt gatcatttgt 1080
     57       tattctcccg atcgccgttg ttgagtgttt acgccgacat gagcaacacc tgccgagaat 1140
     58       acagtgatcc agacaaatcc atgttggaat tggtgctggc tccggcccag gattggatcg 1200
     59       gcaaatccga cgaagagatt gtggcggcca ccatggcgga gatcaagcaa ctctttcccc 1260
     60       aacacttcaa cggggataat ccagcccgac tgcttaaatc ccacgtggtc aaaaccccca 1320
     61       gctcagtcta caaagctacc cccggaaggc aggcttgtcg ccccgatcaa cggacatcgg 1380
     62       tgcccaactt ttacctagca ggggacttca ccatgcaaaa atacttgggc agtatggaag 1440
     63       gggcggtgct ttccggcaaa caatgcgccc aggcgatcgc cgccgatttc aacccccaaa 1500
     64       ccgttccccc caccagggaa atagtcaccg tgggttaagc cgcctggact ccctggtaat 1560
     65       cttcctgaca aatggcaacc ctaatgcgac aatgctaaat ggctaacggt caaatttctc 1620
     66       cccagcgtgc agttaccaaa ccccaatcct ggtggctgac ttccgaaccc cgtccgtcct 1680
     67       taatgttaca actgcccaaa ccgtctccat ctgcaaagcc ctgtgcttct gttga      1735
     69 <210> SEQ ID NO: 4
     70 <211> LENGTH: 20
     71 <212> TYPE: DNA
     72 <213> ORGANISM: Artificial Sequence
     73 <220> FEATURE:
     74 <223> OTHER INFORMATION: Description of Artificial Sequence: Primer
     75 <220> FEATURE:
     76 <221> NAME/KEY: modified_base
     77 <222> LOCATION: (3)
     78 <223> OTHER INFORMATION: a, g, c or t
     79 <220> FEATURE:
     80 <221> NAME/KEY: modified_base
     81 <222> LOCATION: (6)
     82 <223> OTHER INFORMATION: a, g, c or t
     83 <220> FEATURE:
     84 <221> NAME/KEY: modified_base
     85 <222> LOCATION: (12)
     86 <223> OTHER INFORMATION: a, g, c or t
     87 <400> SEQUENCE: 4
W--> 88       ggnacngayg cnttycarga                                          20
     90 <210> SEQ ID NO: 5
     91 <211> LENGTH: 18
     92 <212> TYPE: DNA
     93 <213> ORGANISM: Artificial Sequence
     94 <220> FEATURE:
     95 <223> OTHER INFORMATION: Description of Artificial Sequence: Primer
     96 <220> FEATURE:
     97 <221> NAME/KEY: modified_base
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Input Set : **N:\Crf4\Refhold\09_folder\I893033.raw**
Output Set: **N:\CRF4\08022004\I893033.raw**

98 <222> LOCATION: (10)
99 <223> OTHER INFORMATION: a, g, c or t
100 <220> FEATURE:
101 <221> NAME/KEY: modified_base
102 <222> LOCATION: (13)
103 <223> OTHER INFORMATION: a, g, c or t
104 <400> SEQUENCE: 5
W--> 105 **ytsccaytgn cknaccat** **18**
107 <210> SEQ ID NO: 6
108 <211> LENGTH: 1959
109 <212> TYPE: DNA
110 <213> ORGANISM: Synechocystis sp.
111 <220> FEATURE:
112 <221> NAME/KEY: modified_base
113 <222> LOCATION: (1843)
114 <223> OTHER INFORMATION: a, t, c, g, other or unknown
115 <400> SEQUENCE: 6
116 gccataggag cccatcgccg attgagttca aattagaagc acttagccta cgcttcctaa 60
117 accgattgtc cagtggttgc atcaattcct aatcccaaaa caaatttcct gaaaactgtt 120
118 cctagccaac ggcaaaccgg ggcttatatc ctgatggata gcctgaaacg ccatggggtc 180
119 aaacacattt ttggctatcc cggcggggca attttgccca tctatgatga actgtaccgc 240
120 tttgaagcgg cgggggaaat tgagcatatt ttggtgcgcc atgaacaagg agcttcccat 300
121 gcggcggatg ggtatgccag agccacaggt aaagtgggag tttgtttcgg tacatctgga 360
122 ccaggggcga ctaacttggt gaccggcatt gccaatgccc atttggactc ggtgcccatg 420
123 gtggtgatta ctggagaggt gggccgtgcc atgattggta gcgatgcttt ccaggaaatt 480
124 gacatttttg gcatcacctt accgatcgtt aagcactcct atgtggtacg tagtgcggcg 540
125 gatatggctc gcattgttac tgaggctttc catcttgcta gcaccggtcg tcccgggccg 600
126 gttttgatcg atattcccaa ggatgtgggc ttagaagaat gtgagtacat tcccctcgac 660
127 cccggtgacg ttaatctacc gggttatcgc cccacggtta aaggtaatcc ccgacaaatt 720
128 aatgcggcat tgcaattgtt ggagcaggcc agaaatccct tgctctacgt agggggaggg 780
129 gcgatcgccg ccaatgccca tgcccaggtg caggaatttg cggaaaggtt ccagttgccg 840
130 gtaacaacca ccctgatggg aattggggct tttgacgaaa accatcccct ttcggtgggt 900
131 atgttgggta tgcatggcca ccgctatgcc aactttgccg tcagcgaatg tgatttgttg 960
132 attgcagtgg gggcccgttt cgacgaccgg gtaactggca aactagacga atttgctagc 1020
133 cgcgccaaag taattcacat tgacatcgac ccggcggagg tgggaaaaaa cagggctccc 1080
134 gatgtgccca ttgtggggga tgtacgccat gttttagaac agcttttgca gcgggcccgg 1140
135 gaattggatt accccaccca tccccatacc acccaggcat ggttaaatcg cattgatcat 1200
136 tggcggaccg attacccccc ccaggtgccc cactatgagg atactattgc cccccaggag 1260
137 gtagtacacg aaattggtcg ccaggccccc gatgcctact acaccaccga tgtgggacaa 1320
138 caccaaatgt gggcggccca gtttttgaac aatggccccc gccgatggat ttccagtgct 1380
139 ggcttgggta cgatgggctt tggtttacct gccgccatgg gagccaaagt gggagtgggg 1440
140 gacgagcggt catttgcatc agtggagatg ccagcttcca aatgaatctt caggaactgg 1500
141 gaaccctagc ccagtacgac atccaggtta aaactattat tctcaataac ggttggcagg 1560
142 ggatggtgcg tcagtggcaa caaactttct acgaagaacg ttattctgct tctaacatgt 1620
143 cccagggcat gccagacatt aatctcctct gtgaagccta tggcatcaag ggtattactg 1680
144 tgcgcaagcg ggaagatttg gccccggcga tcgccgaaat gctagcccac aatggtcctg 1740
145 tggtgatgga tgtggtggtc aaaaaagatg aaaactgtta ccctatgatt gcccccggca 1800
W--> 146 **tgagtaatgc ccaaatgcta ggtttaccgg aagtgccggt acnggacaat ggtccccgga** 1860
147 tggtggagtg caaccattgc caaacccaaa atttcatcac ccatcgtttc tgttctggtt 1920

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Input Set : **N:\Crf4\Refhold\09_folder\I893033.raw**
Output Set: **N:\CRF4\08022004\I893033.raw**

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148       gtggagccaa actctaaccc ataagccaaa attgaattc                          1959
150 <210> SEQ ID NO: 7
151 <211> LENGTH: 18
152 <212> TYPE: DNA
153 <213> ORGANISM: Artificial Sequence
154 <220> FEATURE:
155 <223> OTHER INFORMATION: Description of Artificial Sequence: Primer
156 <400> SEQUENCE: 7
157       attgacattt ttggcatc                                                 18
159 <210> SEQ ID NO: 8
160 <211> LENGTH: 19
161 <212> TYPE: DNA
162 <213> ORGANISM: Artificial Sequence
163 <220> FEATURE:
164 <223> OTHER INFORMATION: Description of Artificial Sequence: Primer
165 <400> SEQUENCE: 8
166       tatccgccgc actacgtac                                                19
168 <210> SEQ ID NO: 9
169 <211> LENGTH: 22
170 <212> TYPE: DNA
171 <213> ORGANISM: Artificial Sequence
172 <220> FEATURE:
173 <223> OTHER INFORMATION: Description of Artificial Sequence: Primer
174 <400> SEQUENCE: 9
175       caggggcgac taacttggtg ac                                            22
177 <210> SEQ ID NO: 10
178 <211> LENGTH: 22
179 <212> TYPE: DNA
180 <213> ORGANISM: Artificial Sequence
181 <220> FEATURE:
182 <223> OTHER INFORMATION: Description of Artificial Sequence: Primer
183 <400> SEQUENCE: 10
184       accgctatgc caactttgcc gt                                            22
186 <210> SEQ ID NO: 11
187 <211> LENGTH: 22
188 <212> TYPE: DNA
189 <213> ORGANISM: Artificial Sequence
190 <220> FEATURE:
191 <223> OTHER INFORMATION: Description of Artificial Sequence: Primer
192 <400> SEQUENCE: 11
193       ggaggatagt acacgaaatt gg                                            22
195 <210> SEQ ID NO: 12
196 <211> LENGTH: 22
197 <212> TYPE: DNA
198 <213> ORGANISM: Artificial Sequence
199 <220> FEATURE:
200 <223> OTHER INFORMATION: Description of Artificial Sequence: Primer
201 <400> SEQUENCE: 12
202       aaatcttccc gcttgcgcac ag                                            22
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PATENT APPLICATION: **US/09/893,033** TIME: 11:59:11

Input Set : **N:\Crf4\Refhold\09_folder\I893033.raw**
Output Set: **N:\CRF4\08022004\I893033.raw**

<210> SEQ ID NO: 13
<211> LENGTH: 23
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: Description of Artificial Sequence: Primer
<400> SEQUENCE: 13
ccaatttcgt gtactacctc ctg 23

<210> SEQ ID NO: 14
<211> LENGTH: 21
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: Description of Artificial Sequence: Primer
<400> SEQUENCE: 14
aaagtgggag tgggggacga a 21

<210> SEQ ID NO: 15
<211> LENGTH: 22
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: Description of Artificial Sequence: Primer
<400> SEQUENCE: 15
cggtggaatt ttaccccaat gg 22

<210> SEQ ID NO: 16
<211> LENGTH: 23
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: Description of Artificial Sequence: Primer
<400> SEQUENCE: 16
ggccctaaaa cttggattcc agg 23

<210> SEQ ID NO: 17
<211> LENGTH: 565
<212> TYPE: DNA
<213> ORGANISM: Synechocystis sp.
<400> SEQUENCE: 17
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ctctctgttt tagttgaaga tgaagccgga gtgctaaccc gcattgccgg actatttgcc 120
cgccgtggtt ttaacattga gagcttggcg gtggggtcgg cggaacaggg ggacgtttcc 180
cgcatcacca tggtggtgcc gggggatgag aacaccatcg aacaactgac caagcaactc 240
tacaagttgg ttaacgtaat taaagtacag gacatcaccg aaactccctg tgtggaaagg 300
gaattgatgc tggtgaaggt gagcgccaat gcccctaacc gagcggaagt gattgagcta 360
gcccaggtat tccgggcccg cattgtggat atctccgaag acaccgtcac catcgaatgg 420
tgggggaccc gggtaaaatg gtagcaatcc tccagatgtt ggccaagttg gcattaaaga 480
ggtggctcga acgggcaaaa ttgctttggt gcgggaatcc ggcgtcaata cggaatatct 540
gaaatccctg gaatccaagt tttag 565

<210> SEQ ID NO: 18
<211> LENGTH: 25

RAW SEQUENCE LISTING ERROR SUMMARY DATE: 08/02/2004
PATENT APPLICATION: **US/09/893,033** TIME: 11:59:12

Input Set : **N:\Crf4\Refhold\09_folder\I893033.raw**
Output Set: **N:\CRF4\08022004\I893033.raw**

Please Note:
Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:4; N Pos. 3,6,12
Seq#:5; N Pos. 10,13
Seq#:6; N Pos. 1843

Invalid Line Length:
The rules require that a line not exceed 72 characters in length. This includes spaces.

Seq#:1; Line(s) 5

VERIFICATION SUMMARY DATE: 08/02/2004
PATENT APPLICATION: **US/09/893,033** TIME: 11:59:12

Input Set : **N:\Crf4\Refhold\09_folder\I893033.raw**
Output Set: **N:\CRF4\08022004\I893033.raw**

L:88 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:0
L:105 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:0
L:146 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6 after pos.:1800